

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

KIPB LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD.;
SAMSUNG ELECTRONICS AMERICA, INC.;
SAMSUNG SEMICONDUCTOR, INC.;
SAMSUNG AUSTIN SEMICONDUCTOR, LLC;
AND QUALCOMM GLOBAL TRADING PTE.
LTD.,

Defendants.

Case No. 2:19-cv-00056

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff KIPB LLC, formerly known as KAIST IP US LLC (“KAIST IP US”), hereby alleges infringement of United States Patent No. 6,885,055 (the “’055 Patent”) against Defendants Samsung Electronics Co., Ltd. (“SEC”), Samsung Electronics America, Inc. (“SEA”), Samsung Semiconductor, Inc. (“SSI”), and Samsung Austin Semiconductor LLC (“SAS”) (collectively, “Samsung”), and Qualcomm Global Trading Pte. Ltd. (“Qualcomm”), as follows:

THE PARTIES

1. Plaintiff KAIST IP US is a corporation organized and existing under the laws of the State of Texas, having a principal place of business at 2591 Dallas Parkway, Frisco, Texas 75034.

2. Defendant SEC is a corporation organized and existing under the laws of the Republic of Korea, and located at 129 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do,

Republic of Korea.

3. Defendant SEA is a corporation organized and existing under the laws of the state of New York, with corporate offices in the Eastern District of Texas at 1301 E. Lookout Drive, Richardson, Texas 75082, and 2800 Technology Drive, Suite 200, Plano, Texas 75074. Defendant SEA may be served with process through its registered agent CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, Texas 75201-3136.

4. Defendant SSI is a corporation organized and existing under the laws of the State of California, and is located at 3655 North First Street, San Jose, California 95134. Defendant SSI may be served with process through its registered agent National Registered Agents, Inc., 1999 Bryan St., Ste. 900, Dallas, Texas 75201-3136.

5. Defendant SAS is a limited liability company organized and existing under the laws of the State of Delaware, and is located at 12100 Samsung Boulevard, Austin, Texas 78754. Defendant SAS may be served with process through its registered agent CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, Texas 75201-3136.

6. Defendant Qualcomm is a Singapore corporation located at 6 Serangoon North Avenue 5, #04-02, Singapore, 554910, Singapore.

7. Defendant SAS is a wholly-owned subsidiary of Defendant SSI, which is a wholly-owned subsidiary of SEA, which is a wholly-owned subsidiary of SEC. Defendant Qualcomm is a wholly-owned subsidiary of Qualcomm, Inc.

8. Defendants have authorized sellers and sales representatives that offer and sell products pertinent to this Complaint throughout the State of Texas, including this District and to consumers throughout this District, such as: AT&T Store at 1712 E Grand Ave, Marshall, Texas 75670; Verizon Authorized Retailer - Victra at 1006 E End Blvd N, Marshall, Texas 75670; Best

Buy at 422 W TX-281 Loop Ste 100, Longview, Texas 75605; Amazon.com; and IRIwest.

JURISDICTION; VENUE; JOINDER

9. This action arises under the patent laws of the United States, Title 35 of the United States Code (“U.S.C.”) § 101 *et seq.*

10. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331, 1332, and 1338(a).

11. Each Defendant is subject to this Court’s specific and general personal jurisdiction consistent with the principles of due process and/or the Texas Long Arm Statute.

12. Personal jurisdiction exists generally over the Defendants because each Defendant has sufficient minimum contacts with the forum as a result of business conducted within the State of Texas and the Eastern District of Texas, and Defendants are registered with the Secretary of State to do business in the State of Texas. Personal jurisdiction also exists over each Defendant because it, directly or through subsidiaries or intermediaries, makes, uses, sells, offers for sale, imports, advertises, makes available, and/or markets products within the State of Texas and the Eastern District of Texas that infringe one or more claims of patent asserted in this Complaint, as alleged more particularly below.

13. Venue in this District is proper under 28 U.S.C. §§ 1400(b) and 1391(b) and (c) because each Defendant is subject to personal jurisdiction in this District and has committed acts of infringement in this District. Each Defendant, through its own acts and/or through the acts of each other Defendant acting as its representative, alter ego, or agent, makes, uses, sells, and/or offers to sell infringing products within this District, has a continuing presence within the District, and has the requisite minimum contacts with the District such that this venue is a fair and reasonable one. Upon information and belief, each Defendant has transacted, and at the time of the filing of the Complaint, is continuing to transact business within this District.

14. Defendants are properly joined under 35 U.S.C. § 299(a)(1) because, as set forth in greater detail below, Defendants, through their own acts and/or through the acts of each other Defendant acting as the its representative, alter ego, or agent, commonly and/or jointly manufacture semiconductors and/or sell infringing application processor chips and consumer products incorporating such chips, such that at least one right to relief is asserted against Defendants jointly, severally, and in the alternative with respect to the same transactions, occurrences, or series of transactions or occurrences relating to the making, using, selling and/or offering to sell in, and/or importing into the United States the same accused products.

15. Defendants are properly joined under 35 U.S.C. § 299(a)(2) because, as set forth in greater detail below, Defendants, through their own acts and/or through the acts of each other Defendant acting as its representative, alter ego, or agent, make, use, sell and/or offer to sell in, and/or import into the United States the same or similar accused application processor chips for use in the same or similar accused products, such that questions of fact will arise that are common to all Defendants.

16. Upon information and belief, each Defendant serves a representative, alter ego, and/or agent of each other Defendant for the purposes of conducting business in the United States and this District as relates to making, using, selling, offering to sell, and importing into the United States infringing goods and services.

17. Upon information and belief, each Defendant exercises direction and control over the performance of each other Defendant, or they form a joint enterprise such that the performance by one Defendants is attributable to each other Defendant.

PRIOR LITIGATION

18. On November 29, 2016, KAIST IP US filed suit in this District against the Samsung Defendants and Defendant Qualcomm's parent entity, Qualcomm Inc., among other

defendants, for infringement of the '055 Patent in *KAIST IP US LLC v. Samsung Electronics Co., Ltd., et al*, Case 2:16-cv-01314-JRG-RSP (the "1314 Case").

19. By stipulation and agreement of the parties, the 1314 Case covered certain 14 nm bulk FinFET technology: the 14LPE and 14LPP nodes, chips manufactured on those nodes, and consumer products containing such chips. Infringement based on other bulk FinFET technology nodes was reserved for future actions. For example, in a February 26, 2018 hearing, counsel for Defendants made the following representation:

The Court: But LPU is not in the case. Everybody -- you're agreeing with that.

Defendants' Counsel: Absolutely, it's not in the case.

20. The 1314 Case was tried to a jury in June 2018. On June 15, 2018, the jury returned a verdict that all of the defendants infringed Claims 1–6, 11–13, and 15–17 of the '055 Patent. The jury found that none of the asserted claims were invalid and that the infringement by the Samsung Defendants was willful. The jury awarded KAIST IP US damages in the amount of \$400 Million.

21. During the 1314 Case, the Defendants filed four petitions for *inter partes* review ("IPR"), IPR 2017-01046, IPR 2017-01047, IPR 2018-00266 and IPR 2018-00267, with the Patent Trial & Appeal Board ("PTAB") at the United States Patent & Trademark Office ("USPTO"). The PTAB denied all of these IPR petitions and requests for reconsideration.

BACKGROUND

22. The '055 Patent, entitled "Double-Gate FinFET Device and Fabricating Method Thereof," issued on April 26, 2005. A Certificate of Correction for the '055 Patent issued on September 13, 2016. A true and correct copy of the '055 Patent is attached hereto as Exhibit A.

23. KAIST IP US owns by assignment all right, title, and interest in and to the '055 Patent, including the right to all remedies for past and ongoing infringement thereof. During the

1314 Case, the Court upheld KAIST IP US's standing to sue for infringement.

24. KAIST IP US is the international branch of KIPB Co. Ltd., formerly known as KAIST IP Co., Ltd. ("KAIST IP"), which is an entity formed to promote the intellectual property of and technology developed by research institutes and universities, such as the Korea Advanced Institute of Science and Technology ("KAIST"), one of South Korea's premiere research universities.

25. KAIST was founded in 1971 as Korea's first research-oriented science and engineering institution, has over 9,000 students and 1,100 faculty researchers today, and holds more than 3,300 registered patents worldwide. KAIST has ranked 1st in Korea and 21st in the world for engineering and information technologies. In 2015, Thomson Reuters named KAIST as the 10th most innovative institution in the world, and the Times Higher Education ranked KAIST as the 3rd best university in the world under 50 years old.

26. The '055 Patent is directed towards "FinFET" devices, a type of field-effect transistor. It has been cited by or against over 180 patents and patent applications, including numerous patents and applications owned by the Samsung Defendants.

27. Transistors are semiconductor devices that are formed on wafers, which are made by foundries. Wafers contain multiple, identical chips which are designed by chip designers. Individual chips are cut from the wafers and packaged. Those chips go into a variety of consumer products, such as smartphones, tablets, personal computers, and automobile parts and components.

28. A chip designer designs its own chips that go into consumer products. A "fab-less" chip designer uses foundries as contractors. A foundry manufactures chips for its customers. A product company then incorporates those chips into its consumer products. For

example, Samsung is a foundry, chip designer, and product company. Qualcomm is a chip designer and contracts Samsung for foundry services. Samsung and Qualcomm chips are incorporated into a variety of products, including Samsung's own products.

29. Since the 1950s, the two-dimensional planar transistor has been the fundamental building block of modern integrated circuits or chips. For decades, the industry was able to shrink the features of these transistors, building more transistors into a given area with each new generation of process technology. This trend is commonly referred to as Moore's Law. However, the planar transistor reached the limits of scalability and, at around the 20/22 nm node, failed as a commercially viable solution.

PROFESSOR LEE AND HIS INVENTION

30. The sole inventor of the '055 Patent is Jong-Ho Lee, who is currently a Professor in the Department of Electrical and Computer Engineering, at Seoul National University ("SNU"), and the director of the Inter-university Semiconductor Research Center. He was previously Vice Dean of the College of Engineering at SNU from 2015 to 2017.

31. Professor Lee is the inventor on over 80 patents worldwide, the author of over 500 technical publications, and has served on committees for technology advancement and education in the Korean Ministry of Science & Technology.

32. Professor Lee started researching semiconductor technologies in the 1980s. By the late 1990s, Professor Lee focused his research in the novel direction of "bulk" three-dimensional ("3D") or non-planar structures, such as FinFET devices. During the course of this research, Professor Lee invented the bulk FinFET design that is claimed in the '055 Patent. The '055 Patent inventions provide dramatically greater performance, lower power consumption, and cost savings, among other benefits.

33. Professor Lee, his work, and the '055 Patent invention have been distinguished

and recognized in numerous awards. For example, the Kyung-Ahm Education & Culture Foundation awarded Professor Lee with its 13th Kyung-Ahm Award on November 3, 2017 for his bulk FinFET invention. The Korean government awarded Professor Lee with its highest honor, the National Medal, on May 19, 2015 for his bulk FinFET and other inventions. The Korea Engineering Academy awarded Professor Lee with the Award of Excellence on March 12, 2015 for having developed a bulk FinFET device. The Minister of Science and Technology awarded Professor Lee with its Certificate of Merit on October 13, 2006 for outstanding contribution to the development of high-density, high-performance, three-dimensional nano-scale CMOS devices, such as his bulk FinFET invention.

34. Professor Lee is also an Institute of Electrical and Electronics Engineers (“IEEE”) Fellow, which is a distinction reserved for select IEEE members with extraordinary accomplishments, and a committee member of the IEEE International Electron Devices Meeting.

35. Professor Lee’s pioneering vision would prove to be an incredibly important advancement in semiconductor technology. Today, the entire industry has embraced his bulk FinFET design as the only mass-scale, commercially viable solution. Intel Corporation (“Intel”) is a licensee of Professor Lee’s invention.

DEFENDANTS’ CONTINUING INFRINGEMENT

36. Despite the jury’s verdict of infringement in the 1314 Case, Defendants have not ceased their infringing activities, have refused to pay the judgment rendered against them, and have not obtained a license to the ’055 Patent. Instead, Defendants continue to design, develop, manufacture, implement, and commercialize additional bulk FinFET technologies that infringe the ’055 Patent.

37. Samsung developed and commercialized a new 14LPU node of its 14 nm bulk FinFET technology that was found infringing in the 1314 case, and additional bulk FinFET

technologies at 11 nm, 10 nm, 8 nm, and 7 nm. Defendants design, develop, manufacture, and/or sell chips fabricated on the 14LPU and the sub-14 nm nodes, and products that incorporate such chips.

38. For example, in October 2016, Samsung announced, “it has commenced mass production of System-on-Chip (SoC) products with 10-nanometer (nm) FinFET technology for which would make it first in the industry.”

39. According to Samsung, “Samsung’s new 10nm FinFET process (10LPE) adopts an advanced 3D transistor structure with additional enhancements in both process technology and design enablement compared to its 14nm predecessor, allowing up to 30-percent increase in area efficiency with 27-percent higher performance or 40-percent lower power consumption.”

40. In November 2016, Samsung announced it was “expanding its advanced foundry process technology offerings with the fourth-generation 14-nanometer (nm) process (14LPU) and the third-generation 10nm process (10LPU) to meet the requirements of next generation products ranging from mobile and consumer electronics to data centers and automotives.”

41. According to Samsung, “Samsung’s fourth-generation 14nm process technology, 14LPU, delivers higher performance at the same power and design rules compared to its third-generation 14nm process (14LPC). 14LPU will be optimally suited for high-performance and computer-intensive applications.” Each 14 nm generation is based on the same design rules. For example, 14LPU provides +15% boosted performance under the same design-rule as 14LPE, 14LPP, and 14LPC.

42. According to Samsung, “Samsung’s third-generation 10nm process, 10LPU, will provide area reduction compared to its previous generations (10LPE and 10LPP). Due to limitations of current lithography technologies, 10LPU is expected to be the most cost-effective

cutting-edge process technology in the industry. Together with the second-generation 10nm process (10LPP) that offers an extra performance boost from 10LPE, 10LPU is positioned to meet the needs of an extended range of applications that can benefit from the advanced 10nm process.”

43. In November 2016, Samsung announced that they “have extended their decade-long strategic foundry collaboration to manufacture Qualcomm Technologies’ latest Snapdragon premium processor, Qualcomm Snapdragon 835, with Samsung’s 10-nanometer (nm) FinFET process technology.”

44. According to Qualcomm, “[u]sing the new 10nm process node is expected to allow our premium tier Snapdragon 835 processor to deliver greater power efficiency and increase performance while also allowing us to add a number of new capabilities that can improve the user experience of tomorrow’s mobile devices. . . . Compared to its 14nm FinFET predecessors, Samsung’s 10nm technology allows up to a 30% increase in area efficiency with 27% higher performance or up to 40% lower power consumption. Using 10nm FinFET, the Snapdragon 835 processor will offer a smaller chip footprint, giving OEMs more usable space inside upcoming products to support larger batteries or slimmer designs.”

45. In December 2016, Qualcomm announced, “commercial sampling and conducted a live demonstration of the world’s first 10nm server processor. As the first in the Qualcomm Centriq™ product family, the Qualcomm Centriq 2400 series has up to 48-cores and is built on the most advanced 10nm FinFET process technology. The Qualcomm Centriq 2400 series features the Qualcomm® Falkor™ CPU, Qualcomm Datacenter Technologies’ custom ARMv8-compliant core, which is highly optimized to deliver both high performance and power efficiency, and designed to tackle the most common datacenter workloads.”

46. In February 2017, Samsung announced, “the launch of its latest premium application processor (AP), the Exynos 9 Series 8895. This is Samsung’s first processor chipset to take advantage of the most advanced and industry leading 10-nanometer (nm) FinFET process technology with improved 3D transistor structure, which allows up to 27% higher performance while consuming 40% less power when compared to 14nm technology.”

47. By March 2017, Samsung had “shipped more than 70,000 silicon wafers of its first-generation 10nm LPE (Low Power Early) to date.”

48. In April 2017, Samsung announced the “commercial launch of its Galaxy S8 and Galaxy S8+” smartphones, which incorporate the Exynos 8895 processor. According to Samsung, “[t]he upgraded specs of the Galaxy S8 offer both increased performance and efficiency thanks to the industry’s first 10nm processor” and “boosts the device’s CPU functionality and GPU performance by 10 and 21 percent respectively, while reducing battery consumption by a full 20 percent.”

49. In September 2017, Samsung announced, “it has added 11-nanometer (nm) FinFET process technology (11LPP, Low Power Plus) to its advanced foundry process portfolio, offering customers with an even wider range of options for their next-generation products.”

50. According to Samsung, “[t]hrough further scaling from the earlier 14LPP process, 11LPP delivers up to 15 percent higher performance and up to 10 percent chip area reduction with the same power consumption. In addition to the 10nm FinFET process for mobile processors in premium flagship smartphones, the company expects its 11nm process to bring differentiated value to mid- to high-end smartphones.”

51. In November 2017, Samsung announced, “its Foundry Business has commenced mass production of System-on-Chip (SoC) products built on its second generation 10-nanometer

(nm) FinFET process technology, 10LPP (Low Power Plus).”

52. According to Samsung, “10LPP process technology allows up to 10-percent higher performance or 15-percent lower power consumption compared to its first generation 10nm process technology, 10LPE (Low Power Early). As this process is derived from the already proven 10LPE technology, it offers competitive advantages by greatly reducing turn-around time from development to mass production and by providing significantly higher initial manufacturing yield.”

53. In November 2017, Qualcomm announced that it had “started to ship its 10nm Centriq 2400 server processors in commercial quantities. . . . The Qualcomm Centriq 2400 processor is fabricated on Samsung’s 10-nm FinFET process, with 18 billion transistors in an area under 400mm².”

54. According to Qualcomm, the 48-core Centriq 2460 processor offers 4X better performance per dollar and 45% better performance per watt.

55. Additionally, in October 2017, Samsung announced, “8-nanometer (nm) FinFET process technology, 8LPP (Low Power Plus), has been qualified and is ready for production.” According to Samsung, “8LPP provides up to 10-percent lower power consumption with up to 10-percent area reduction from 10LPP through narrower metal pitch. 8LPP will provide differentiated benefits for applications including mobile, cryptocurrency and network/server, and is expected to be the most attractive process node for many other high performance applications.”

56. According to Qualcomm, “8LPP will have a fast ramp since it uses proven 10nm process technology while providing better performance and scalability than current 10nm-based products.”

57. In October 2018, Samsung announced, “it has completed all process technology development and has started wafer production of its revolutionary process node, 7LPP, the 7-nanometer (nm) LPP (Low Power Plus) with extreme ultraviolet (EUV) lithography technology.”

58. According to Samsung, “Compared to its 10nm FinFET predecessors, Samsung’s 7LPP technology not only greatly reduces the process complexity with fewer layers and better yields, but also delivers up to a 40% increase in area efficiency with 20% higher performance or up to 50% lower power consumption” and the “commercialization of its newest process node, 7LPP gives customers the ability to build a full range of exciting new products that will push the boundaries of applications such as 5G, Artificial Intelligence, Enterprise and Hyperscale Datacenter, IoT, Automotive, and Networking.”

59. Samsung owns and operates a fab in Austin, Texas (S2-line), which implements the infringing bulk FinFET technology nodes.

60. Defendant SEC is comprised of three business units. One business unit (CE Division) makes and sells consumer electronics goods, such as televisions and refrigerators. A second business unit (Mobile Division) makes and sells mobile devices, such as smartphone and tablets. A third business unit (LSI Division) makes and sells semiconductor chips, such as application processors, which are incorporated into smartphones (such as those made and sold by the Mobile Division). The LSI Division serves both internal and external customers. Internal customers may refer to, for example, the Samsung Mobile Division. External customers refer to chip customers, such as Qualcomm. Defendant SEA is the U.S. subsidiary that sells Samsung’s consumer electronics goods and mobile devices in the United States, including those that incorporate the infringing bulk FinFET technologies; Defendant SSI is the entity that operates a

research and development center and sells semiconductor chips that incorporate the infringing bulk FinFET technologies; and Defendant SAS is the U.S. subsidiary that mass produces semiconductor devices, including transistors, such as the infringing bulk FinFET device, at the fab in Austin, Texas, which serves U.S. customers (external customers).

61. Defendants have not been and are not authorized to practice the '055 Patent.

62. Defendants have reaped and will continue to reap billions of dollars in revenues and savings based on their willful infringement.

THE ACCUSED INSTRUMENTALITIES

63. Defendants make, use, sell and/or offer to sell in, and/or import into, the United States semiconductor devices, processor chips incorporating such semiconductor devices, and/or consumer products incorporating such processor chips that infringe at least Claims 1–7, 9–17, and 19 of the '055 Patent (“Accused Instrumentalities”).

64. The Accused Instrumentalities include, but are not limited to, Samsung’s bulk FinFET technologies, such as its 14 nm, 11 nm, 10 nm, 8 nm, and 7 nm bulk FinFET technologies, which include but are not limited to the 14LPU, 11LPP 10LPE, 10LPP, 10LPU, 8LPP, and 7LPP nodes (“FinFET Technology”).

65. The Accused Instrumentalities also include processor chips that are manufactured using Samsung’s FinFET Technology, such as Samsung’s Exynos 9 Series of processors, including but not limited to the Exynos 8895, 9610, and 9810, and Qualcomm’s Snapdragon 835, Snapdragon 845, and Centriq 2400 line of processors (“FinFET Chips”).

66. The Accused Instrumentalities also include consumer products that incorporate FinFET Chips, including but not limited to the Samsung Galaxy S8, Galaxy S8 Active, Galaxy S8+, Galaxy S9, Galaxy S9+, Galaxy Note 8, and Galaxy Note 9; automotive products and platforms, such as advanced driver assistance and infotainment systems, that are

manufactured using Samsung's FinFET technology, including but not limited to the Exynos Modem 5100 and LPDDR4X DRAM for vehicles; and memory chips that are manufactured using Samsung's FinFET technology, including but not limited to the DDR4 DRAM, GDDR5 DRAM, GDDR6 DRAM, LPDDR4 mobile DRAM, LPDDR4x mobile DRAM, and LPDDR5 mobile DRAM ("FinFET Products").

COUNT 1

67. Defendants have committed and continue to commit acts of direct infringement by making, using, selling, offering to sell, and/or importing Accused Instrumentalities, including but not limited to the accused FinFET Technology, Chips, and Products.

68. Exhibit B details the manner in which the Accused Instrumentalities infringe the '055 Patent by way of a representative example of the accused FinFET Technology, Chips, and Products. For illustrative purposes, Exhibit B charts the FinFET device in the Qualcomm Snapdragon 835 processor, which is fabricated by the accused Samsung 10 nm FinFET Technology. The Qualcomm Snapdragon 835 processor is incorporated into the Samsung Galaxy S8 smartphone, among other products.

69. On information and belief, the accused FinFET Technology, Chips, and Products are materially the same with respect to infringement. The Accused Instrumentalities are based on the same or substantially similar design rules and utilize the same or substantially similar architecture. Exhibit B is illustrative of the manner in which each of the accused FinFET Technology, Chips, and Products infringe.

70. Defendants have actual notice of the '055 Patent and their infringing activities relating to the '055 Patent no later than the November 2016 filing of the 1314 Case.

71. Defendants have been and are indirectly infringing the '055 Patent by actively inducing or contributing to the direct infringement by others of the '055 Patent, in the United

States, the State of Texas, and the Eastern District of Texas.

72. Defendants have induced and continue to induce through affirmative acts each other, their customers, and other third parties, such as fab-less designers of FinFET Chips and end-consumers of FinFET Products, to directly infringe the '055 Patent by making, using, selling, and/or importing the Accused Instrumentalities.

73. The affirmative acts of inducement by Defendants include, but are not limited to, any one or a combination of: (i) designing infringing processors for manufacture according to specification; (ii) collaborating on and/or funding the development of the infringing processors and/or technology; (iii) soliciting and sourcing the manufacture of infringing processors; (iv) licensing and transferring technology and know-how to enable the manufacture of infringing processors; (v) enabling and encouraging the use, sale, or importation of infringing processors; (v) enabling and encouraging the use, sale, or importation of infringing processors by its customers; and (vi) advertising the infringing processors and/or technology.

74. Defendants knew that the induced conduct would constitute infringement, and intended that infringement at the time of committing the aforementioned acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement, or deliberately avoiding learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

75. Defendants have contributed and continue to contribute to the direct infringement of the '055 Patent by each other, their customers, and other third parties.

76. Defendants import, export, make or sell parts, components, or intermediate products to customers and third parties that, once assembled, infringe upon the '055 Patent by the sale and/or use of the assembled processors and/or devices.

77. Defendants make, use, sell, and/or offer to sell infringing semiconductor devices and/or processor chips, which are especially made to design and specification, and are not staple products or commodities with substantial noninfringing use.

78. Defendants knew of or were willfully blind to the specialized and non-commodity nature of the infringing semiconductor devices and/or processor chips, and the lack of substantial noninfringing uses.

79. Defendants have failed to take adequate steps to determine whether or not they were infringing or would infringe the '055 Patent, despite having been on notice of and lacking permission to practice the '055 Patent.

80. Therefore, Defendants are liable for infringement of the '055 Patent and their infringement has been and continues to be willful in nature.

81. Plaintiff KAIST IP US has incurred and will continue to incur substantial damages, including monetary damages.

82. Plaintiff KAIST IP US has been and continues to be irreparably harmed by Defendants' infringement of the '055 Patent.

83. Therefore, Plaintiff KAIST IP US is entitled to an injunction, actual and/or compensatory damages, reasonable royalties, pre-judgment and post-judgment interest, enhanced damages, and costs.

REQUEST FOR RELIEF

WHEREFORE, Plaintiff KAIST IP US respectfully requests that this Court:

A. Enter judgment in favor of Plaintiff KAIST IP US that the '055 Patent is valid and enforceable;

B. Enter judgment in favor of Plaintiff KAIST IP US that Defendants have infringed and continue to infringe the '055 Patent, and finding that such infringement is willful;

C. Award Plaintiff KAIST IP US all monetary relief available under the patent laws of the United States, including but not limited to actual and/or compensatory damages, reasonable royalties, pre-judgment and post-judgment interest, enhanced damages, and costs pursuant to 35 U.S.C. § 284;

D. Order Defendants to pay ongoing royalties in an amount to be determined for any continued infringement after the date that judgment is entered;

E. Declare this case exceptional and award Plaintiff KAIST IP US its reasonable attorney fees pursuant to 35 U.S.C. § 285;

F. Enjoin each Defendant, its officers, subsidiaries, agents, servants, and employees, and all persons in active concert with any of the foregoing, from further infringement of the '055 Patent; and

G. Grant Plaintiff KAIST IP US all such other relief as the Court deems just and equitable.

DEMAND FOR JURY TRIAL

Plaintiff KAIST IP US demands a jury trial on all issues so triable pursuant to Rule 38 of the Federal Rules of Civil Procedure.

Date: February 14, 2019

Respectfully submitted,

/s/ Robert Christopher Bunt

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